

REMARKS

Claims 1-32 are pending. Claims 11 and 23 are amended. Claims 28-32 are newly added.

The Examiner is thanked for performing a thorough search. The Examiner is also thanked for indicating that claims 6, 8, 23, and 25 contain allowable subject matter.

I. OBJECTION TO CLAIMS 11-16 AND 23

The Office Action objects to claims 11-16 and 23 for lack of antecedents for “the current active directory information tree” and “the directory tree manager” in claim 11 and “the validity designation value” in claim 23. Accordingly, claims 11 and 23 are amended to correct the antecedents issues pointed out by the Office Action. The antecedent of claims 12-16 has been corrected by the correction of the antecedents in claim 11.

II. SUMMARY OF REJECTION

Claims 1-5, 7, 9-22, 24 and 26-27 were rejected under 35 USC 103(a) as allegedly unpatentable over Chu et al. in view of the Applicants’ alleged admitted prior art.

III. INDEPENDENT CLAIMS 1, 9, 11, 17, 18, 26, and 27

A. The Office Improperly Relies Upon Alleged Admitted Prior Art

The Office Action alleged that page 1, lines 22-24, of the specification were admitted prior art. The Applicants disagree. Page 1, line 22, through page 2, line 1, state

Concurrently, those of skill in this field have developed interest in using directory services as a repository for storing a representation of quality of service policies, and other information about physical and logical elements of the network. Directory services based on the ITU X.500 standard, or based on other standards such as Lightweight Directory Access Protocol (LDAP), are receiving particular attention.

This passage only states that “those of skill have developed [an] *interest*...” (emphasis added). An “interest” is not a working device. An “interest” means that those of skill in the

field wished they could use directory services for QoS policies, but had not figured out how. There is no evidence that anyone having the “interest” made or even knew how to make “a repository for storing a representation of quality of service policies” “using directory services”—indeed, Applicants are the first.

The initial burden of proof is upon the U.S. Patent & Trademark Office to establish a prima facie case of obviousness (MPEP 2142, p. 2100-123). Until the Office shows otherwise through proper prior art references, the Office cannot assume that anyone actually used or knew how to use directory services as a repository for storing a representation of quality of service policies.

Further, a reference forming a valid basis of rejection under 35 USC 103 must also satisfy 35 USC 112, first paragraph—the reference must provide an enabling disclosure. There is no evidence that anyone knew how to use “directory services as a repository for storing a representation of quality of service policies.” The alleged admitted prior art does not teach how to use “directory services as a repository for storing a representation of quality of service policies.” Therefore, the alleged admitted prior art is not a valid reference under 35 USC 112, first paragraph, and consequently it is not a valid reference under 35 USC 103 (Cf. MPEP 2121.01). Indeed, the alleged admitted prior art may be evidence of a long felt unsolved need in the prior art, which provides evidence of non-obviousness according to MPEP 2141, p. 116; see *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).

Applicants are not determining at this time which problems (if any) of the background section were old and well known and which problems (if any) were first discovered by the Applicants. Applicants reserve the right to argue that they were the first to recognize any or all of the problems identified in the background section of the application,

and that discovery of a problem is part of the determination of non-obviousness. But even if the background cited by the Office Action is considered a proper reference, when the application is considered as a whole, the application fails to support the rationale suggested by the Office Action.

For example, page 2, lines 4-12, of the specification recognizes a data consistency problem with integrating quality of service systems and directory services; page 2, lines 18-24, of the specification show that the prior art has problems with synchronization, incomplete or stale data, obsolete policies, and not getting complete updates; page 3, lines 9-12, of the specification indicate that the prior art also has problems with maintaining consistency and completeness of policy information. Page 3, lines 19-23, of the specification state:

....problems that arise in using directory services [as a repository for storing a representation of quality of service policies], including data concurrency, LDAP client behavior, data integrity, and other implementation issues. There is a need in this field for a way to integrate a quality of service policy management system with a directory service while overcoming these integration problems.

Based on all the foregoing, the background of the specification contains many teachings that teach away from making the claimed invention, which the Office Action does not discuss. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. MPEP 2141.03, p.2100-122, citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); MPEP 2146 (X)D(3), p. 2100-153 ("The totality of the prior art must be considered," citing *In re Hedges*, 783 F.2d 1038, 228 USPQ 685 (Fed. Cir. 1986).

Furthermore, "[k]nown disadvantages in old devices which would naturally discourage search for new inventions may be taken into account in determining obviousness." *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966)

(emphasis added). Thus, whether a negative teaching appears in the same reference or in separate references, the negative teaching must be considered. Here, one of ordinary skill in the art would not have found it obvious to use directory services as a repository for storing a representation of quality of service policies for the myriad of problems that arose in the prior approaches identified and circumvented by Applicants' specification.

For all the foregoing reasons, the alleged admitted prior art is improperly relied upon and should be withdrawn as a reference.

B. Chu et al. Fails to Teach or Suggest the Subject Matter of the Claims

The Office Action alleges that for Claim 1, Chu et al. fails to teach only that "dynamic" directory information includes "quality of service policy/parameters." Applicants disagree. In support of the Office Action's allegations, FIG. 6a and column 2, lines 15-22 of Chu et al. are cited. These portions of Chu et al. do not support the rationale of the Office Action.

Column 2, lines 15-22, states

One such dynamic directory service is provided by the User Location Service (ULS). The ULS is known within the art, and is specifically described in R. Williams, Internet Draft "draft-uls-1.txt", February 1996, which is hereby incorporated by reference. A server maintaining a dynamic directory as provided by the ULS is receptive to requests from clients to add entries to the directory that include a time-to-live value set by the client.

The Office Action also cites column 8, lines 51-58, which states

For example, a dynamic directory service provided by extending the static directory service of the Lightweight Directory Access Protocol (LDAP), as is described in a following section of this detailed description, may utilize the directory data format already specified by the LDAP, which is a complex tree data structure understood by those skilled in the art.

However, FIG. 6a, and the two above passages do not disclose a (1) plurality of directory information trees, (2) a directory information tree manager, or (3) active and nonnative

directory information trees. For example, the phrase “tree manager” does not appear in the specification.

Further, the Office Action states

Chu et al. teaches...when information is needed, determining which one of the directory information trees is a currently active directory information tree [col. 8, lines 51-58; note that it is obvious that only the relevant tree needs to be checked]

Applicants disagree. Column 8, lines 51-58, only mention one complex tree. There is no description or suggestion about making any determination of inactive trees. An inactive tree may contain useful information, as recognized by Applicants. Consequently, not accessing an inactive tree for useful information would not have been obvious to one of ordinary skill. Chu et al. has no disclosure of not retrieving information for a tree after the time-to-live period has expired, and before the tree is deleted. Additionally, the specification and claims are not limited to dynamic directory services.

The alleged admitted prior art does not cure the deficiencies pointed out above in Chu et al. For all the foregoing reasons, the rejection of Claim 1 should be withdrawn.

IV. CLAIMS 2 AND 19

Regarding claim 2, the Office Action cites page 4, lines 1 and 2, as admitted prior art, which state

Tree locking is one possible approach to these problems. In tree locking, the directory tree is locked by a reader or writer process until that process is complete.

This is a statement of what the applicants knew at the time the specification was filed.

However, this passage provides no admission that the *prior art* recognized that “Tree locking is one possible approach to these problems,” nor is there any indication that one of skill in the art would have combined a tree locking technique with Chu et al. The mere presence of a statement in the background section of an application is not an automatic admission about the

scope or content of the prior art, and the Office Action does not provide any motivation in the prior art to combine tree locking with Chu et al.

Even if the Office Action can properly rely on applicant's background section, the case law requires the Office to consider the entirety of the specification, which in its totality teaches away from the rationale of the Office Action. For example, the specification states:

However, this creates the undesirable possibility that the tree could be locked and then the reader or writer process could crash, leaving the tree locked perpetually. In the policy management environment, this possibility cannot be eliminated because the directory tree and consumer processes are not commonly controlled.

Thus, the background teaches that applying tree locking has the potential consequence of leaving the tree locked perpetually, which is a possibility that could not be eliminated in prior approaches. Consequently, one of ordinary skill in the art would not have thought to apply tree locking to Chu et al. after modifying it to be a policy management environment.

Accordingly, it would not have been obvious to one of ordinary skill in the art to apply tree locking and designate a tree as currently active only after all read and write operations are complete within the device of Chu et al. (after modifying Chu et al.'s device to be a policy management environment), because there is a possibility that cannot be eliminated of perpetually leaving the tree locked.

V. NEW CLAIMS

New claim 28 recites a directory information, a directory of information tree manager, and subtrees, to clarify that the subtrees of Chu et al. are not trees.

New claim 29 contains the subject matter of allowable claim 6 except without the much of the subject matter of claims 1 and 4.

New claim 30 contains the subject matter of claims 4 and allowable claim 6 except without the much of the subject matter of claim 1.

New claim 31 contains the subject matter of claim 1 and allowable claim 6, but does not contain the subject matter of claim 4.

New claim 32 contains the subject matter of allowable claim 8, except without much of the subject matter of claim 1. Also claim 32 is a computer readable medium claim, whereas claim 8 is a method claim.

VI. DEPENDENT CLAIMS 2-5, 7, 10, 12-16, 9-22, and 26

Each of claims 2-5, 7, 10, 12-16, 9-22, and 26 depends upon one or more of independent claims 1, 9, 11, 17, 18, 26, and 27 and is allowable for at least the same reasons. Although each of the remaining dependent claims 2-5, 7, 10, 12-16, 9-22, and 26 contain features that are separately patentable over the claims from which they depend (as for example was discussed regarding claims 2 and 19, above), in view of the patentability of independent claims, the remaining dependent claims are not argued at this time to expedite prosecution.

CONCLUSION

For the reasons set forth above, all pending claims are patentable over the art of record. Accordingly, allowance of all claims is hereby respectfully solicited. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.


No extension fee is believed to be due. However, to the extent necessary, Applicants petition for an extension of time under 37 C.F.R. § 1.136. The Commissioner is authorized to

charge any fee that may be due in relation to this application to our Deposit Account No. 50-1302.

Respectfully submitted,

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A handwritten signature in cursive script, appearing to read "David Lewis", is written over a horizontal line.

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